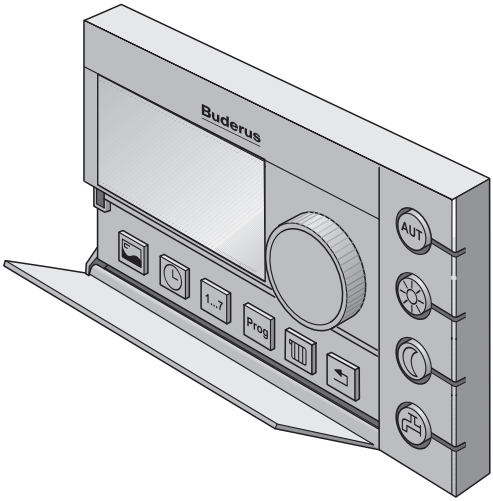
Operating instructions

RC30 programmable room thermostat

Also applies to the following accessories: mixing valve module MM10 and low loss header module WM10



Buderus

Contents

1 Introduction 4

2 What you should know about your heating system 5

2.1 How does the RC30 work? 5
2.2 Control modes for the RC30 6
2.3 Why do the thermostatic radiator valves have to stay fully open? 7
2.4 Why do I need a heating program? 8
2.5 What are heating circuits? 9

3 Tips on economical heating 11

4 For your safety 13

4.1 Correct use 13
4.2 Please observe these notes 13
4.3 Cleaning 14
4.4 Disposal 14
4.5 Other notes 14

5 First steps with your RC30 15

5.1 Controls 15
5.2 Quick reference guide 17
5.3 Switching on and off 18

6 Language 19

7 Basic functions 20

7.1 Changing the room temperature directly 20
7.2 Selecting the operating mode 20
7.3 Setting the room temperature 24
7.4 Heating domestic hot water 26

8 Extended functions 30

8.1 Buttons for extended functions 30
8.2 Using the extended functions 30
8.3 Displaying operating menu 31
8.4 Setting the date 33
8.5 Setting the time 34
8.6 Selecting a heating circuit 35

Contents

8.7 Changing settings for another heating circuit . . . 37
8.8 Selecting and modifying a heating program . . . 39
8.9 Selecting a preset heating program . . . 40
8.10 Overview of the preset heating programs . . . 41
8.11 Modifying the heating program by moving switching points . . . 42
8.12 Creating a new heating program . . . 45
8.13 Adding switching points . . . 47
8.14 Deleting switching points . . . 48
8.15 Setting the operating mode for domestic hot water . . . 50
8.16 Entering a DHW program . . . 51
8.17 Setting the operating mode for DHW circulation . . . 53
8.18 Entering a DHW circulation program . . . 54
8.19 Changing the standard display . . . 55

9 Special functions (additional menu) . . . 56

9.1 Opening and using the additional menu . . . 57
9.2 Setting the holiday function . . . 58
9.3 Setting the bank holiday function . . . 62
9.4 Calibrating the room temperature . . . 64
9.5 Setting the Party function . . . 66
9.6 Setting the Pause function . . . 67
9.7 Thermal disinfection . . . 69
9.8 Changing the standard display . . . 70
9.9 Switching on the button lock . . . 71
9.10 Setting summer/winter changeover . . . 72
9.11 Automatic summer and winter time adjustment . . . 75
9.12 Setting the preheat phase for a gas-operated heat pump (not in the UK) . . . 76

10 Troubleshooting . . . 78

10.1 Frequently asked questions . . . 78
10.2 Fault table . . . 81

11 Index . . . 83

We reserve the right to make any changes due to technical modifications.

1 Introduction

The RC30 makes it easy to operate your Buderus heating system and forms part of the Energy Management System (EMS). The heating system is controlled in such a way that you benefit from optimum heating comfort and minimum energy consumption.

The RC30 is factory-preset. You can adjust these settings, such as the heating program for example, and match them to your requirements.

Special functions help you to save energy, without sacrificing your personal comfort.

Your heating system offers a wealth of other useful functions, including automatic summer/winter changeover and a holiday function.

Function modules (accessories)

These instructions also apply to the RC30 used in conjunction with the mixer module MM10 and low loss header module WM10 (see also page 9). These function modules are set up by your installer and do not need to be modified.

CE

This device meets all requirements of applicable standards and guidelines.
Conformity has been verified. All associated documents and the declaration of conformity are available from the manufacturer.

2 What you should know about your heating system

2.1 How does the RC30 work?

The RC30 ensures comfortable heat and economical consumption of fuel and electricity. It switches the boiler and pumps ON if DHW (domestic hot water) or a higher room temperature are required.

Modern heating control units calculate the temperature required within the boiler (the so-called flow temperature) subject to the outside temperature and the desired room temperature (set temperature). The relationship between the outside temperature and the flow temperature is described as the heating curve. The lower the outside temperature, the higher the flow temperature must be to achieve the required room temperature.

For example, if you increase the set room temperature by 2 °C, the heating curve is raised in parallel. This increases the flow temperature by around 6 Kelvin (one Kelvin corresponds to one degree Celsius).

The gradient of the heating curve depends on the type of heating system (e.g. radiators or underfloor heating). This will be determined by your installer during the commissioning process.

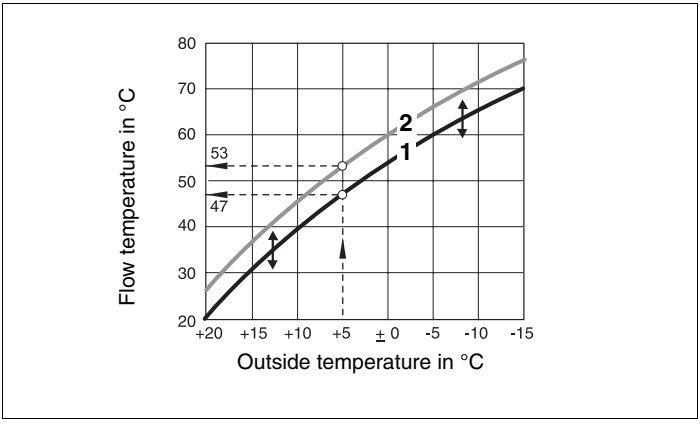


*Fig. 1 Heating curve (example), before (**1**) and after (**2**) increasing the set room temperature by 2 °C*

2.2 Control modes for the RC30

The RC30 can operate in three control modes:

– outside temperature dependent control

– room temperature control or

– outside temperature control with room temperature influence

Outside temperature dependent control

With outside temperature dependent control, only the outside temperature measured by the outside temperature sensor is taken into account for the flow temperature level. The advantage of outside temperature dependent control is that the overall heat requirement of the house is considered, rather than the temperature in a single reference room where the thermostat is located. Room temperature fluctuations through solar gain, occupants, open fireplaces or similar external heat sources are then ignored.

If you use this type of control, adjust the thermostatic radiator valves so that the required room temperature is obtained in each room.

Room temperature control*)

A further possible RC30 method is room temperature control. The RC30 calculates the temperature required inside the boiler or the output required from the boiler, subject to the set and the actual room temperature.

To be able to utilise the room temperature control, you require a room which is representative of your whole home. All factors influencing the temperature in this "reference room" – in which the RC30 is located – will also apply to all other rooms. Not every home has a room which meets these requirements. A pure room temperature control has, in such cases, certain limitations.

Should you, for example, open a window in the room where the room temperature is measured, the control unit will "think" that you have opened the windows in all rooms in your home and will begin to heat more vigorously.

**) Please note that the RC30 has to be located in the reference room and not in the boiler for this option*

We reserve the right to make any changes due to technical modifications.

Or conversely: You measure the temperature in a south-facing room with different heat sources (solar or other heating sources, e.g. an open fireplace). Now the control unit "thinks" that it is as hot in all rooms as in the reference room; consequently the boiler output will be severely cut back so that, for example, the north-facing rooms are too cold.

With this kind of control you will need to keep all thermostatic radiator valves in the reference room fully open.

Outside temperature dependent control with room temperature influence *)

The outside temperature dependent control with room temperature influence combines the advantages of both above control modes. The required flow temperature, which is mainly subject to the outside temperature, can be adjusted by the room temperature only to a limited degree. This achieves an improved maintenance of the room temperature within the room containing the RC30, without fully ignoring the other rooms.

With this kind of control you will also need to keep all thermostatic radiator valves in the reference room fully open.

2.3 Why do the thermostatic radiator valves have to stay fully open?

For example, if you want to reduce the room temperature in the reference room and you close the thermostatic valve, the flow rate through the radiator will be reduced and, therefore, less heat is transferred to the room. This reduces the room temperature. The RC30 unit will endeavour to counteract the falling room temperature by raising the flow temperature. However, raising the flow temperature will not raise the room temperature, as the thermostatic valve continues to limit the room temperature.

A flow temperature which is too high results in unnecessary heat losses in boiler and pipework. At the same time, the temperature in all other rooms without thermostatic valves increases due to the higher boiler water temperature.

**) Please note that the RC30 has to be located in the reference room and not in the boiler for this option*

2.4 Why do I need a heating program?

Unlike standard controls, the RC30 offers more choice than just ON/OFF. Modern heating systems offer a choice of heating programs. A heating program sets the times at which the system automatically switches between two different room temperatures. The first setting, called „day mode“, is for when the building is actively occupied and a higher temperature is required. The second setting, called „night mode“ is not just for the night but for any time when you want to maintain a lower temperature i. e. when the building is unoccupied or when everyone is in bed at night. This enables you to set a reduced room temperature at night or at other times when a reduced temperature is sufficient (also known as "night setback"). You can save a lot of energy by choosing a heating program to match your lifestyle.

The RC30 offers four options on "night mode" for reducing the room temperature. Your installer will select and set up one of these options according to your requirements:

– "OUTSIDE STOP" (also possible without remote control, outside sensor required)
"Outside stop" switches the heating circuit according to the outside temperature and the set frost protection temperature (see Chapter 5.8.10 "Frost protection", page 39).
Above the frost protection temperature the heating circuit is switched off. Below this temperature the system heats to the set night mode temperature.

– - "ROOM STOP" (only possible with RC30 in reference room)
"Room stop" switches the heating circuit according to the room temperature.
Above the set room temperature the heating circuit is switched off. Below the set room temperature the system heats to the set night mode temperature. This function requires the RC30 to be located in the reference room.

– "STANDBY" (also possible without remote control)
Here the heating circuit is simply turned off in night mode. You must activate frost protection monitoring (see Chapter 5.8.9 "Frost protection type", page 38).

- "REDUCED" (also possible without remote control)
Here the system heats to the set night temperature in setback heating mode.
The heating circuit pumps operate constantly.

The heating program is only switched on in **automatic mode**; night setback is not available in manual mode.

2.5 What are heating circuits?

A heating circuit describes the circuit taken by the heating water from the boiler via the radiators and back to the boiler (Fig. 1 on page 5). Several heating circuits may be connected to one boiler, for example one heating circuit for supplying radiators and a further heating circuit for supplying an underfloor heating system. In this case, the radiators are supplied at a higher flow temperature than the underfloor heating system.

With the RC30 you can operate and control the two heating circuits independently (Fig. 2, **Item 1**). If the second heating circuit is used to supply a separate flat or area of the building, a separate room controller RC20 can also be installed (Fig. 2, **Item 2**). This allows you to operate the second heating circuit as an "independent" system.

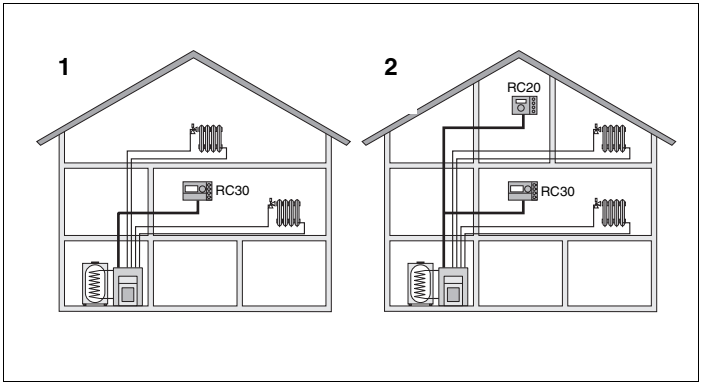


*Fig. 2 Heating system with two heating circuits. One RC30 for both heating circuits (**1**) or RC30 plus RC20 as a remote control for the second heating circuit (**2**).*

Mixer module MM10

The supply of different flow temperatures to different heating circuits in a heating system can only be achieved if a three-way mixing valve is installed between the boiler and the second heating circuit. This valve is controlled by the mixer module MM10 (accessory). Using an additional temperature sensor in the flow of the heating circuit to be supplied, sufficient cold return water is added to the hot flow water via the three-way mixing valve to achieve the required lower temperature.

Low loss header module WM10

It is important to note that heating circuits with three-way mixing valves require an additional pump. This pump enables the second heating circuit to be operated independently of the first heating circuit. A low loss header can be used for this hydraulic decoupling between the boiler and heating circuit. This is controlled by the function module WM10. The WM10 can also be used for DHW heating via a cylinder loading pump.

3 Tips on economical heating

Here are a few tips on how to heat economically, without sacrificing comfort, using your RC30:

- Only heat if you need warmth. Use the heating programs preset in the RC30 or those which you have tailored to your personal needs.
- Ventilate correctly during the cold season: Open the windows wide three to four times per day for approx. five minutes. Having the window slightly open all the time does not provide fresh air changes and wastes valuable energy.
- Close the thermostatic radiator valves when the room is being ventilated.
- Windows and doors are places where a lot of heat is lost. So check that the doors and windows are correctly sealed. At night, close your shutters and blinds (if installed).
- Heat in an energy-conscious manner during in spring and autumn, and make use of the summer/winter changeover function (see Chapter 9.10 "Setting summer/winter changeover", page 72). In summer mode the heating is switched off and only DHW is heated. In winter mode the heating and DHW are activated.
- Never position large objects such as a sofa or a desk immediately in front of the radiators (maintain a clearance of at least 50 cm). Otherwise the heated air cannot circulate and heat the room adequately.
- In those rooms which you occupy during the day, you can set a room temperature of 21 °C, for example, whilst 17 °C may be sufficient at night. You can do this using day and night modes (see Chapter 7 "Basic functions", page 20).
- Never overheat rooms. Overheated rooms are unhealthy and cost energy and money. If you reduce the daytime room temperature, from 21 °C to 20 °C, for example, you will save around six percent on your heating bill.

3 Tips on economical heating

- A comfortable room climate depends not only on the room temperature but also on the relative humidity. The drier a room, the cooler it feels. You can improve the relative humidity with houseplants.
- You can also save energy when heating DHW by running the circulation pump in intermittent mode only. Research has shown that it is generally sufficient to run the DHW circulation pump for three minutes in every 30.
- Arrange with your installer to service your heating system annually.

4 For your safety

The RC30 has been designed and built in accordance with currently recognised standards and safety requirements. However, dangers or material losses may arise if it is used improperly.

- You should therefore only operate the heating system as intended and when it is in perfect working order.
- Please read these instructions carefully.
- Always observe the safety instructions to prevent injury and material losses.

4.1 Correct use

The RC30 must only be used to operate and control Buderus heating systems with EMS (Energy Management System).

4.2 Please observe these notes

USER NOTE

- In an emergency isolate the heating system from the mains supply using the emergency stop switch outside the boiler room or by removing the main fuse.
- Call in your installer to remedy all faults in your heating system immediately.

CAUTION!

SYSTEM DAMAGE

through frost.

The heating system can freeze up in cold weather if it has been switched off.

- Leave the heating system switched ON constantly.
- In case of fault shutdown, try to remedy the fault by resetting or notify your installer.

4.3 Cleaning

- The RC30 should only be cleaned with a damp cloth.

4.4 Disposal

- Dispose of packaging in an environmentally responsible manner.
- Dispose of old components in an environmentally responsible manner.

4.5 Other notes

Assembly, maintenance and repairs, as well as fault diagnosis, must only be carried out by installers.

USER NOTE

All changes and adjustments carried out on the RC30 must correspond to the heating system requirements.

Never open the housing of the RC30.

5 First steps with your RC30

5.1 Controls

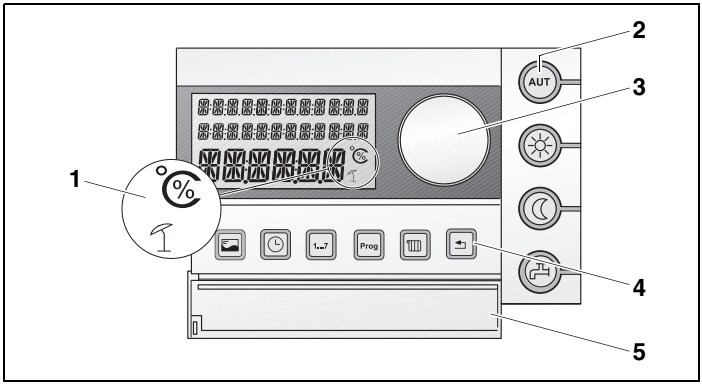


Fig. 3 Controls on the RC30

Item 1: *Temperature, percentage and summer mode display*

Item 2: *Buttons for basic functions with LEDs*

Item 3: *Dial for changing values and temperatures or for navigating through the menus*

Item 4: *Buttons for extended functions and special functions*

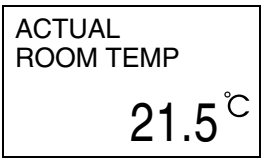
Item 5: *Hinged flap covering the buttons for extended functions and special functions*

Buttons for basic functions (Fig. 3, Item 2)

- "AUT" button (Automatic)
- "Day mode" button (normal heating mode)
- "Night mode" button (reduced heating mode)
- "DHW" button

Buttons for extended functions (Fig. 3, Item 4)

- "Display" button
- "Time" button
- "Weekday" button (Day / Date)
- "Prog" button (Program)
- "Heating circuit" button
- "Back" button



Display (Fig. 3, Item 1)

As soon as you press a button or move the dial, the display shows the selected value (set value). After about 2 seconds the standard display is restored.

The standard display shows the actual room temperature. This is the factory setting. You can also choose a different standard display (see Chapter 8.19 "Changing the standard display", page 55).

LEDs (Fig. 3, Item 2)

The green LEDs provide information about the current operating status:

LED	Operating status
"AUT"	The LED lights up when automatic mode (heating program) is active. In addition, the "Day mode" or "Night mode" LED is illuminated. If the holiday function is active, only the "AUT" button LED is illuminated.
"Day mode"	The LED lights up in normal heating mode (day mode).
"Night mode"	The LED lights up in reduced heating mode (night mode).
"DHW"	The LED lights up if the DHW temperature falls below the set value.
	The LED is off if the DHW temperature is within the desired temperature range or if there is no DHW heating function installed in the EMS.
	The LED flashes when hot water is being heated by means of the "DHW single loading" function.

Tab. 1 Operating status

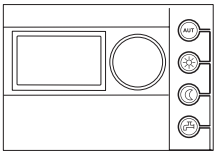
Flap (Fig. 3, Item 5)

To open the flap, take hold of the recessed grip on the left-hand side and pull the flap towards you. Opening the flap activates a switch allowing you to use the extended functions and special functions.

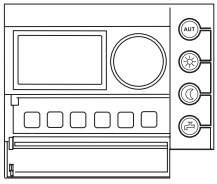
5.2 Quick reference guide

For funktions press and hold button, turn dail to select value, release button.

Setting temperatures (Basic functions, Chapter 7, page 20)

	Buttons	Function	Factory setting	Setting	
				Range	System
 Flap closed	+	Temperature for day mode	21 °C	11 – 30 °C	
	+	Temperature for night mode	17 °C	10 – 29 °C	
	+	DHW temperature	60 °C	30 – 60(80) °C	
	AUT	Return to Automatic mode after changing the day or night temperature			

Extended functions (Chapter 8, page 30)

	Buttons	Function	Page
 Flap open	+	Changing the standard display	page 55
	+	Setting the time	page 34
	+	Setting the date	page 33
	+	Selecting a heating program	page 39
	+	Select: heating circuit, DHW, solar	page 35
		Back to previous level (menu), settings are retained	

Additional menu (Chapter 9, page 56)

	Buttons	Menu	Menu
+ Press the "Time" and "weekday" buttons at the same time to open the additional menu.	+	HOLIDAY	THERM DISINF
		BNK HOLIDAY	STD DISPLAY
		CALIBRATION	KEY LOCK
		PARTY	SU/WI CHANGE
		PAUSE	SU/WI TIME

5.3 Switching on and off

The RC30 is powered by the heating system and is permanently switched on. It is only switched off if the heating system is switched off, e.g. for maintenance purposes.

The power consumption is designed for this constant operation and at 0.3 W is very low (0.6 W with background lighting).

To switch the heating system on or off, set the ON/OFF switch on the base controller (Fig. 4, **Item 1**) to position "1" (ON) or "0" (OFF).

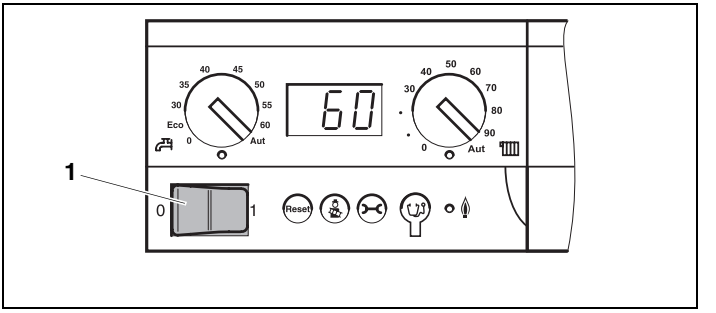


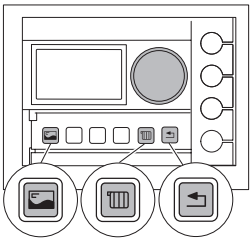
Fig. 4 Base controller BC10

Item 1: *ON/OFF switch on base controller*

USER NOTE

The settings in the RC30 are retained for approximately 10 hours in the event of a power cut (or system shutdown).

6 Language



You can choose the language in which messages on the RC30 are displayed.

Proceed as follows:

- Open the flap (by pulling the recessed grip on the left).

Simultaneously press the "Display", "Heating circuit" and "Back" buttons.

SERVICE MENU
LANGUAGE

The main service level menu is displayed, indicated by "SERVICE MENU".

Press the "Display" button to select "SERVICE MENU LANGUAGE".

Hold down the "Display" button and select the required language with the dial.

LANGUAGE
ENGLISH

The selected language is displayed.

Release the "Display" button. The language selection is saved.

All messages will now be displayed in the chosen language.

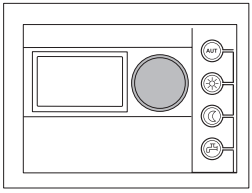
- Press the "Back" button twice or close the flap to return to the standard display.

7 Basic functions

This chapter describes how to change room and DHW temperatures, the advantages of automatic mode, how to make effective use of manual mode, etc.

The basic functions are controlled by pressing and holding a button on the right-hand side of the RC30 and turning the dial.

7.1 Changing the room temperature directly



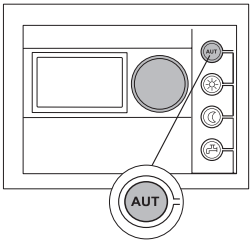
If it is too cold in the house in general, increase the room temperature on the RC30 and leave the thermostatic radiator valves unaltered.

Set the required room temperature by turning the dial. (Note: To do this the RC30 flap must be closed.)

USER NOTE

If your heating system has several heating circuits, you must select the correct heating circuit first (see Chapter 8.6 "Selecting a heating circuit", page 35). Only then can you set the room temperature.

7.2 Selecting the operating mode



You can operate the RC30 in two ways:

– in automatic mode

– in manual mode

7.2.1 Selecting automatic mode

Generally, buildings are heated less at night than during the day. In automatic mode the RC30 changes over automatically between day mode (standard heating mode) and night mode (reduced heating mode). This means that you do not have to adjust the thermostatic radiator valves every morning and evening.

The times at which the heating system changes from day to night mode – and vice versa – are factory-set via the heating program. However, you or your installer can modify this setting (see Chapter 8.9 "Selecting a preset heating program", page 40).

The heating program raises or lowers the room temperature at fixed times. The time at which the system changes from night to day mode (and vice versa) is known as the "switching point".

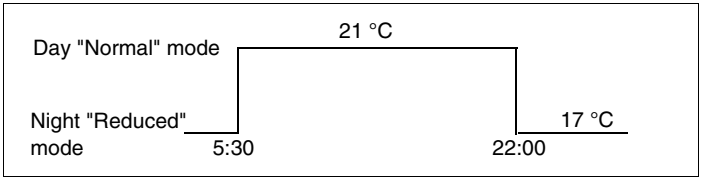
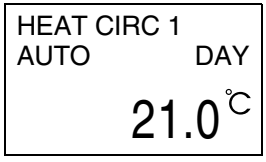


Fig. 5 Changeover between day and night mode at fixed times

Example: Activating automatic mode

Press "AUT".

The LED in the "AUT" button lights up; automatic mode is active.



In addition, either the "Day mode" or the "Night mode" LED is illuminated. This depends on the set times for day and night mode (see Chapter 2.4 "Why do I need a heating program?", page 8).

Depending on which heating circuit you have selected, "HEAT CIRC 2" or "RC30 HEATCIR" may be displayed instead of "HEAT CIRC 1" (see Chapter 8.6 "Selecting a heating circuit", page 35).

USER NOTE

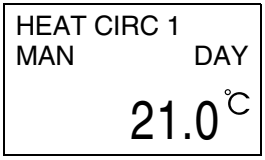
During spring and autumn, you may find that your home feels too cold, even though the heating system is in summer mode (DHW heating only) because of the outside temperature. In such a case choose manual mode to run the heating. The heating is then permanently on and must be turned off by pushing the "AUT" button.

You can also change the setting for automatic summer/winter changeover (see Chapter 9.10 "Setting summer/winter changeover", page 72).

7.2.2 Selecting manual mode

For example, if you want the heating to run for longer in the evening or earlier in the morning, you can also select the day and night mode manually. There are two temperatures for manual day and night mode. You can use manual day mode to run the heating on cooler days,when the system is operating in summer mode.

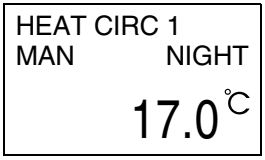
Press the "Day mode" button to switch to manual mode.



The LED in the "Day mode" button lights up. Now your heating system is set in constant day mode (standard heating mode).

You can set the room temperature using the dial.

Press the "Night mode" button to switch to manual mode.



The LED in the "Night mode" button lights up. Now your heating system is set in constant night mode (setback heating mode), and operates at a lower room temperature.

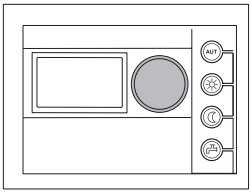
USER NOTE

If you have selected manual mode, other automatic functions will also be switched off, such as the heating program (i.e. no night setback of the room temperature) or summer/winter changeover.

USER NOTE

To return to automatic mode, press "AUT".

7.3 Setting the room temperature

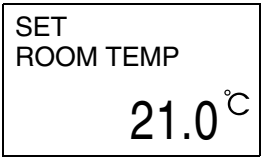


The room temperature applies to the currently active heating mode, i.e. day or night mode. The currently active heating mode is indicated by an illuminated green LED.

7.3.1 Setting the room temperature for the current operating mode

Condition: The RC30 flap is closed.
You are currently in automatic "Day" mode and would like to alter the room temperature.

Set the required room temperature by turning the dial. Turning the dial clockwise increases the value, turning anti-clockwise reduces the value.



The newly selected room temperature will be saved after approx. 2 seconds. Then the selected standard display will be shown again.

To adjust the room temperature with the flap open, you must press either the "Day mode" or "Night mode" button whilst turning the dial.

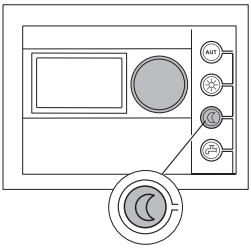
USER NOTE

Changing the set room temperature moves the heating curve up or down in parallel (see "How does the RC30 work?", page 5).

USER NOTE

Any adjustment applies to all heating circuits allocated to the RC30 (see Chapter 8.7 "Changing settings for another heating circuit", page 37).

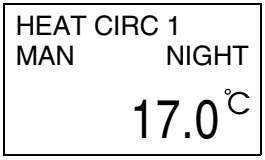
7.3.2 Setting the room temperature for an operating mode that is currently inactive



You can also adjust the room temperature for an operating mode that is currently inactive.

For example, you are currently in automatic "Day" mode and would like to alter the night setback temperature.

Hold down the "Night mode" button and at the same time select the required room temperature with the dial.



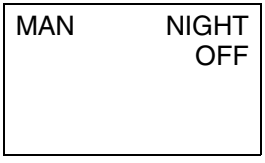
Release the "Night mode" button. The newly selected room temperature will be saved after approx. 2 seconds. Then the standard display will be shown again.

Press "AUT".

The LED in the "AUT" button lights up; automatic mode is active again.

USER NOTE

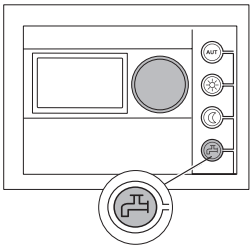
If you are currently in automatic "Night mode" and you wish to adjust the day mode, proceed as described above, but instead hold down the "Day mode" button.



"OFF" message

If your installer has selected "Shutdown" as the setback type, a room temperature cannot be set for night mode (see "Why do I need a heating program?", page 8).

7.4 Heating domestic hot water



The RC30 also allows you to heat the DHW in an energy-conscious manner. With the factory setting, DHW heating begins automatically 30 minutes before day mode starts the first heating circuit, and ends when the last circuit switches to night mode (see Fig. 6).

Outside the times set in the heating program, DHW heating is switched off, i.e. no DHW is heated in night mode.

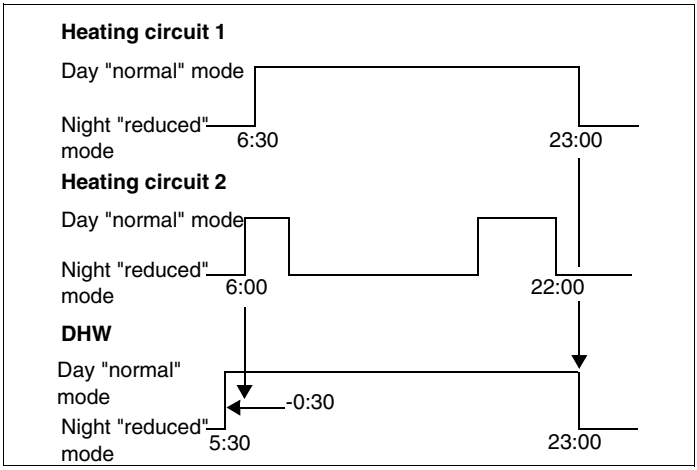


Fig. 6 DHW heating according to the heating circuits

The DHW temperature for day mode is factory-set to 60 °C. The DHW cylinder is loaded once in the morning before the start of heating and is only reloaded if the DHW temperature falls 5 °C below the set value (to conserve energy).

USER NOTE

If the green LED in the "DHW" button lights up, the DHW temperature has fallen below the set value.

USER NOTE

In a modern Buderus DHW cylinder, the water only cools down at a rate of around 0.5 °C per hour when not being drawn, i.e. reloading only occurs after 10 hours. If necessary you can manually reload the DHW to 60 °C (see Chapter 7.4.2 "Single DHW loading", page 28).

If you regularly need large amounts of hot water in the evening, you can also set up a separate DHW program (see Chapter 8.16 "Entering a DHW program", page 51).

7.4.1 Setting the DHW temperature

WARNING!

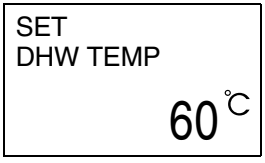
RISK OF SCALDING

The factory-set DHW temperature is 60 °C. There is a risk of scalding at the taps if the temperature is set to above 60 °C.

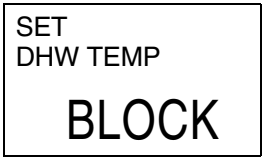
- If the DHW temperature is set to above 60 °C, you should only draw off mixed hot and cold water.

You can check or change the DHW temperature setting:

Hold down the "DHW" button and select the required DHW temperature with the dial (max. 80 °C).



Release the "DHW" button. The new DHW temperature setting is saved immediately. Then the standard display is shown again.



"BLOCK" message

If the display reads "SET DHW TEMP – BLOCK", the DHW temperature can only be changed via the boiler and not via the RC30.

- Check the setting on the BC10 boiler base controller. Select the setting "Aut" using the dial for the DHW temperature.

7.4.2 Single DHW loading

If the LED in the "DHW" button lights up, the DHW temperature has fallen below the set value. Should you require a large amount of hot water, proceed as follows:

Press "DHW".

The LED in the "DHW" button flashes, and single DHW heating begins.

DHW
SGL LOADING

ACTIVE

Depending on the size of the DHW cylinder and the boiler rating, the DHW will be available after approx. 10 to 30 minutes. With instantaneous water heaters or combination boilers, DHW is available almost immediately.

USER NOTE

If you have started this function in error, press "DHW" again. Reloading will then be terminated.

7.4.3 Activating thermal disinfection

If you activate the "Thermal disinfection" [pasteurisation] function, the DHW is heated once a week or once a day to a temperature which is high enough to destroy pathogenic agents (e.g. legionella).

WARNING!

RISK OF SCALDING

from hot water at the taps.
During the thermal disinfection process the DHW can be heated to a temperature above 60 °C.

- Only draw off mixed hot and cold water during or just after thermal disinfection.

Press and hold down the "DHW" button.

Open flap.
Using the dial select "Yes". Then in accordance with the factory settings thermal disinfection begins every Tuesday at 1.00 and heats the water to 70 °C.

THERMAL
DISINFECTION

YES

Release the "DHW" button. Thermal disinfection does not begin immediately but on the specified day at the specified time (see Chapter 9.7 "Thermal disinfection", page 69).

8 Extended functions

The extended functions allow you to access other operating levels in which you can change the presets for your heating system.

8.1 Buttons for extended functions

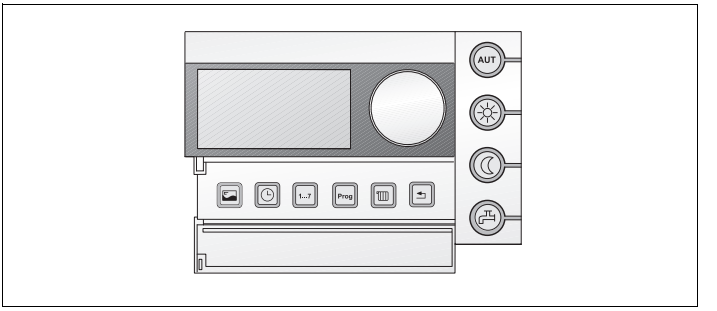


Fig. 7 Buttons for the extended functions

"Display" button

"Time" button

"Weekday" button (day / date)

"Prog" button (Program)

"Heating circuit" button

"Back" button

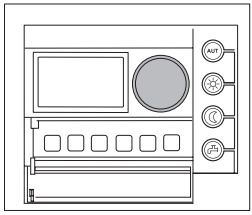
8.2 Using the extended functions

At this level, proceed according to the "Push, hold and turn" principle. The control procedure is always similar:

- Open flap.

Hold down the required button, e.g. the "Time" button, and simultaneously turn the dial. By turning the dial you modify the values which flash in the display.
Release the button. Modified values are saved.

8.3 Displaying operating menu



You can display and check the various operating values of the boiler, the selected heating circuit and the system.

- Open flap.

Turn the dial clockwise. The following operating values are displayed in sequence:

Setting	Explanation
"ACTUAL ROOM TEMP"	Actual room temperature
"SET ROOM TEM"	Set room temperature and operating mode
"OP MODE"	Set operating mode and heating circuit
"BOILER TEMPERATURE"	Actual boiler temperature
"OUTSIDE TEMPERATURE"	Actual temperature outside the building
"ACTUAL DHW TEMP" [1)]	Actual DHW temperature
"SET DHW TEMP" [1)]	Set DHW temperature
"OP MODE DHW" [1)]	Selected mode for DHW
"DHW LOADING" [1)]	Cylinder loading pump is on or off (i.e. DHW is being heated)
"DHW CIRC" [1)]	Circulation pump is on or off
"FLOW TEMPERATURE"	Actual heating circuit flow temperature of heating circuit No. 2 (if installed)
"DATE"	Current date
"TIME"	Current time

Tab. 2 Operating values which can be displayed

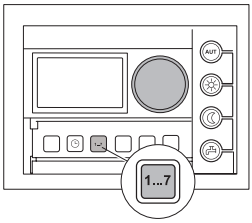
[1)] DHW operating values can only be displayed if a DHW circuit is installed.

Setting	Explanation
"HOURS RUN"	Burner running time Stage 1 Stage 2 (if available)
"FLUE GAS TEMPERATURE"	Actual flue gas temperature (if additional sensor fitted)
"CONTROL DEV USED"	Control device for your heating system
"MODE USED"	Current programming unit for your heating system (RC30 / RC20)

Tab. 2 Operating values which can be displayed

1) DHW operating values can only be displayed if a DHW circuit is installed.

8.4 Setting the date



The correct date must be set on your heating system in order for it to work properly. After an extended power failure, for example, you will therefore have to reset the date on the RC30.

Hold down "Weekday" and select the current day with the dial.

The day of the week is automatically changed.

Release the "Weekday" button.

Hold down "Weekday" again and select the current month with the dial.

Release the "Weekday" button.

Hold down "Weekday" again and select the current year with the dial.

DATE INPUT
WEDNESDAY

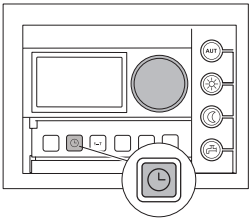
22.05.02

Release the "Weekday" button. The new date is saved.

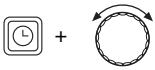
USER NOTE

If no day is displayed, an invalid date has been entered, such as 31.02.03. This date is not saved.

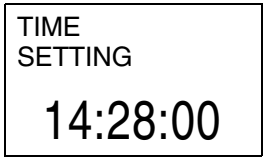
8.5 Setting the time



The correct time must be set on your heating system in order for it to work properly. After an extended power failure, for example, you will therefore have to reset the time on the RC30.



Hold down "Time" and select the current time with the dial.



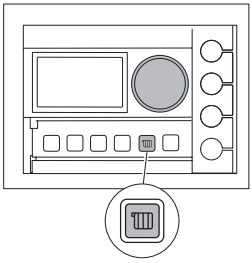
Release the "Time" button. The new time is saved.

USER NOTE

Even after a power failure, the clock continues to run for about 10 hours if the RC30 was previously connected to the power supply for at least six hours.

If the display with the flap open reads "TIME NOT SET" or "DATE NOT SET", you must reset the time or date.

8.6 Selecting a heating circuit



Your heating system may be equipped with several heating circuits. If you want to change a setting – e.g. the heating program – first select the heating circuit with the setting you wish to modify.

Subject to the equipment level of your heating system, the following heating circuits can be selected:

– RC30 heating circuits (all heating circuits that are assigned to the RC30, see "RC30 heating circuits" page 36)

– Heating circuit 1 (unmixed heating circuit)

– Heating circuit 2 (mixed heating circuit)

– DHW

– DHW circulation

Hold down the "Heating circuit" button and select the required heating circuit with the dial.

HEAT CIRC
HEAT CIRC 1

Release the "Heating circuit" button. The displayed heating circuit is now selected.

USER NOTE

When you close the flap, or five minutes after your last setting change, the heating circuit for which the RC30 is responsible is automatically selected.

If there is a separate RC20 connected for each heating circuit, the RC30 automatically switches to heating circuit 1.

RC30 heating circuits

Several heating circuits can be controlled at the same time using the RC30. These are grouped together under the term "RC30 heating circuits".

"RC30 HEATCIR" is displayed as a selection option when you set one of the following functions:

– Operating mode

– Required room temperature

– Holiday

– Bank holiday

– Party

– Pause

– Summer/winter changeover

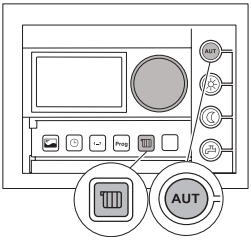
Even if the heating circuits are grouped together, you can still set the functions separately for each circuit. Exception: The operating mode and the required room temperature can only be entered for the "RC30 HEATCIR" together.

A heating program can only be selected separately for each heating circuit.

USER NOTE

You cannot select "RC30 HEATCIR" if the heating system only has one heating circuit or has one programmer per heating circuit. Your installer must have assigned the RC30 as the control for both heating circuit 1 and heating circuit 2.

8.7 Changing settings for another heating circuit



Room temperature and operating mode

Your heating system may be equipped with several heating circuits (see Section 2.5, page 9). If you want to change the room temperature or operating mode for a different heating circuit than the one last selected, first select the required heating circuit.

Subject to the equipment level of your heating system, the following heating circuits can be selected:

– RC30 heating circuits ("RC30 HEATCIR", all heating circuits that are assigned to the RC30, see "RC30 heating circuits" page 36)

– Heating circuit 1 or 2 (not available if more than one heating circuit is assigned to the RC30)

If more than one heating circuit is assigned to the RC30, the room temperature and operating mode for these heating circuits can only be set together. Otherwise the message "RC30 HEATCRC SELECT" is displayed. In such a case select "RC30 HEATCIR".

Hold down the "Heating circuit" button and select the required heating circuit with the dial (here: "HEAT CIRC 2").

HEAT CIRC
HEAT CIRC 2

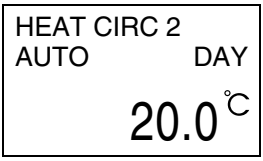
Release the "Heating circuit" button. The displayed heating circuit is now selected.

ACTUAL
ROOM TEMP
21.5 °C

As soon as heating circuit has been selected, the display returns to the standard display.

Automatic mode

Hold down the "AUT" button and select the room temperature with the dial (here: "20 °C") which is required for the heating circuit.



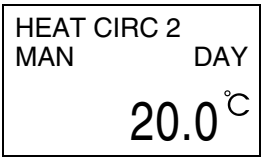
Release the button to store your input.

The heating circuit is now in automatic mode and the day room temperature has been set to 20 °C. Then the selected standard display will be shown again.

Manual mode

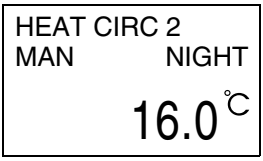
Press either the "Day mode" or "Night mode" button instead of the "AUT" button:

Hold down the "Day mode" button and select the room temperature with the dial (here: "20 °C") which is required for the heating circuit.



The LED in the "Day mode" button lights up. Now the heating circuit is set in constant day mode (standard heating mode).

Hold down the "Night mode" button and select the room temperature with the dial (here: "16 °C") which is required for the heating circuit.



The LED in the "Night mode" button lights up. Now the heating circuit is set in constant night mode (reduced heating mode), and operates at a lower room temperature.

8.8 Selecting and modifying a heating program

What is a heating program?

A heating program provides the automatic changeover of operating mode (day and night mode) at fixed times. In the factory setting the heating program also sets the times for DHW heating and operation of the circulation pump. You can also set up a separate DHW or circulation program.

Before you select a heating program, consider the following:

– At what time in the morning do you want your home to be warm? Does this time also depend on the day of the week?

– Are there days when you don't want to heat during the day?

– From what time in the evenings do you no longer need heating? This too may depend on the day of the week.

With the RC30, Buderus offers eight different, pre-programmed heating programs for direct selection.

USER NOTE

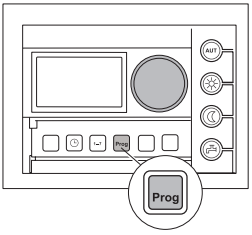
Check after commissioning, whether the selected heating program suits your lifestyle. If this is not the case, several options are available for matching the heating program to your individual requirements so as to optimise heating comfort and energy consumption.

Time taken to heat up the home

The time taken for your heating system to heat up individual rooms may vary. This will be subject to the outside temperature, the building insulation and the drop in room temperature.

The "Optimisation" function of the RC30 calculates the various heat-up times. Ask your installer whether he has activated this function. If he has, all you need to do is enter the times at which your home should be warm.

8.9 Selecting a preset heating program



The RC30 comes with eight different preset heating programs. See the next page for a summary of the time settings for the preset heating programs.

Please check which heating program best meets your requirements. In particular, check the number of switching points and then the times. The "FAMILY" program is factory pre-set.

Each programme can be adjusted or you can enter a specific programme to meet your exact needs.

Select a heating circuit (see Chapter 8.6 "Selecting a heating circuit", page 35).

Press and hold down the "Prog" button.

PROG SELECT
FAMILY

Initially the heating circuit for which you want to select a heating program will be displayed. Two seconds later the name of the currently set heating program will be displayed.

Select the desired heating program using the dial.

Release the "Prog" button. The newly selected heating program is stored and the first switching point is displayed.

Press "Back". The display returns to the standard display.

USER NOTE

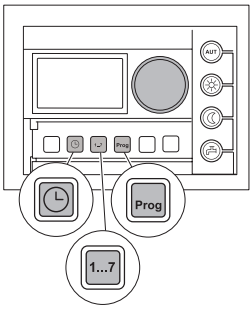
The selected heating program is only effective if automatic mode is set (see Chapter 7.2.1 "Selecting automatic mode", page 21).

8.10 Overview of the preset heating programs

Tab.3 Preset heating programs ("On" = day "Normal" mode, "Off" = night "Reduced" mode)

Program name	Day	ON Normal	OFF Reduced	ON Normal	OFF Reduced	ON Normal	OFF Reduced
"FAMILY"	Mo–Th Fr Sa Su	5:30 5:30 6:30 7:00	22:00 23:00 23:30 22:00				
"EARL MORNING" Early shift work	Mo–Th Fr Sa Su	4:30 4:30 6:30 7:00	22:00 23:00 23:30 22:00				
"EVENING" Late shift work	Mo–Fr Sa Su	6:30 6:30 7:00	23:00 23:30 23:00				
"MORNING" Part-time work in the morning	Mo–Th Fr Sa Su	5:30 5:30 6:30 7:00	8:30 8:30 23:30 22:00	12:00 12:00	22:00 23:00		
"AFTERNOON" Part-time work in the afternoon	Mo–Th Fr Sa Su	6:00 6:00 6:30 7:00	11:30 11:30 23:30 22:00	16:00 15:00	22:00 23:00		
"MID DAY" Lunch at home	Mo–Th Fr Sa Su	6:00 6:00 6:00 7:00	8:00 8:00 23:00 22:00	11:30 11:30	13:00 23:00	17:00	22:00
"SINGLES"	Mo–Th Fr Sa Su	6:00 6:00 7:00 8:00	8:00 8:00 23:30 22:00	16:00 15:00	22:00 23:00		
"SENIORS"	Mo–Su	5:30	22:00				
"NEW PROG"	You can enter your own program here:						
"OWN PROG"	If none of the preset heating programs suit you, you may alter it, have it changed by your installer or enter a completely new heating program (see Chapter 8.12 "Creating a new heating program", page 45). This is stored under "OWN PROG".						

8.11 Modifying the heating program by moving switching points



If the switching points, i.e. the times in a preset heating program at which the system changes over between day and night mode, only partially suit you, you may change them, or ask your installer to change them for you. The modified heating program is then saved under the new name "OWN PROG".

Only one custom heating program can be stored for each period (Mon-Thur, Fri, Sat, Sun), for each heating circuit. If you enter a new "OWN PROG", the previous one will be overwritten.

The example below (Fig. 8) shows how the switching points of the "FAMILY" heating program can be changed for the days Monday to Thursday.

- Select a heating circuit (see Chapter 8.6 "Selecting a heating circuit", page 35).

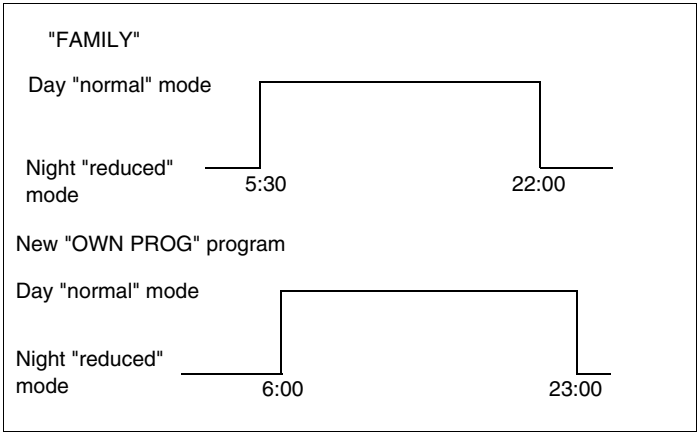
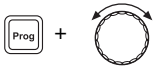


Fig. 8 Changing the switching points from 5:30 to 6:00 and from 22:00 to 23:00 (example)



Hold down the "Prog" button and select the required heating program with the dial.

PROG SELECT
FAMILY

Release the "Prog" button.

SWITCH POINT
ON MO
05:30

The first switching point (Monday, 05:30) appears.

Hold down the "Time" button and select the required time with the dial. Example: "06:00".

Release the "Time" button. The new time for the "On" [start "day mode"] switching point is now saved.

Continue to turn the dial until the next switching point is displayed.

The "Off" [start "night mode"] switching point for Monday then appears. Now you can modify the time for the "Off" switching point.

Hold down the "Time" button and select the required time with the dial. Example: "23:00".

Release the "Time" button. The new time for the "Off" switching point is now saved.

– To add more switching points, refer to section 8.13
– To delete switching points refer to section 8.14

Next switching point

Continue to turn the dial until the next switching point is displayed.

The next switching point (Tuesday, 05:30) appears.

Change these switching points to 6:00 and 23:00 too. Continue to enter the new switching points in this way for the days up to and including Thursday. Now the system will heat from 6:00 to 23:00 from Monday to Thursday.

Press "Back". The modified heating program is stored under the name "OWN PROG". Any previous own program will be overwritten.

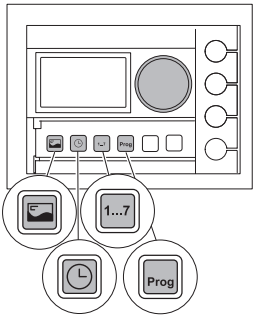
USER NOTE

You can change the day of the week by pressing "Weekday" instead of "Time".

You can change the switch state ("On"/"Off") by pressing "Display" instead of "Weekday" or "Time". The switch state determines the operating mode: "On" = day mode, "Off" = night mode.

Make sure that there is an OFF switching point for every ON switching point so that the heating system can also switch back to night mode.

8.12 Creating a new heating program



You can also set up a new heating program that is tailored entirely to your personal requirements. The RC30 offers blocks of days, which makes programming easier. The new heating program is stored under the name "OWN PROG".

Only one custom heating program can be stored. Per heating circuit, if you enter a new "OWN PROG", the previous one will be overwritten.

For example, you want the heating to run on Monday to Thursday from 05.00 to 21.00, on Friday from 07.00 to 22.00 and on Saturday and Sunday from 09.00 to 23.00.

You can choose from the following input options:

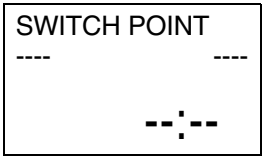
Input	Input range
Weekday	Mo, Tu, We, Th, Fr, Sa, Su, Mo–Th, Mo–Fr, Mo–Su, Sa–Su
Time	00:00 – 23:50
Operating mode (switch state)	"On" = day mode "Off" = night mode

Tab. 3 Overview of the input options for a new heating program

- Select a heating circuit (see Chapter 8.6 "Selecting a heating circuit", page 35).

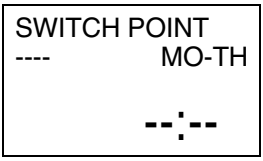
Hold down the "Prog" button and select the "NEW PROG" heating program with the dial.

Release the "Prog" button.



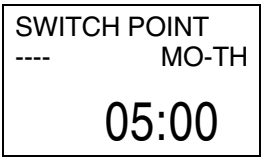
You can now enter the first switching point.

Hold down the "Day/Date" button and select the required day block with the dial. Example: "MO–TH".



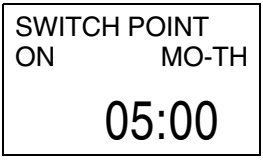
Release the "Day/Date" button.

Hold down the "Time" button and select the required time with the dial. Example: "05:00".



Release the "Time" button.

Hold down the "Display" button and select the "ON" switch state with the dial.



Release the "Display" button. The new switching point is stored.

Next switching point

Enter the next switching point, an OFF switching point.

Continue to turn the dial until the next switching point is displayed.

Repeat the steps as necessary until you have entered the switching points for every day of the week.

Press "Back". Your new heating program is stored under the name "OWN PROG".

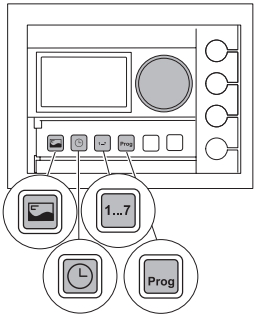
USER NOTE

The next switching point is not displayed until you have entered the day or group of days, time and operating mode (switch state). You can enter them in any sequence.

If you press the "Back" or "AUT" button whilst entering a switching point, a switching point that has been partially entered will be lost.

Make sure that you enter an OFF switching point for every ON switching point so that the heating system can also switch back to night mode.

8.13 Adding switching points



You can also add one or more switching points to an existing heating program.

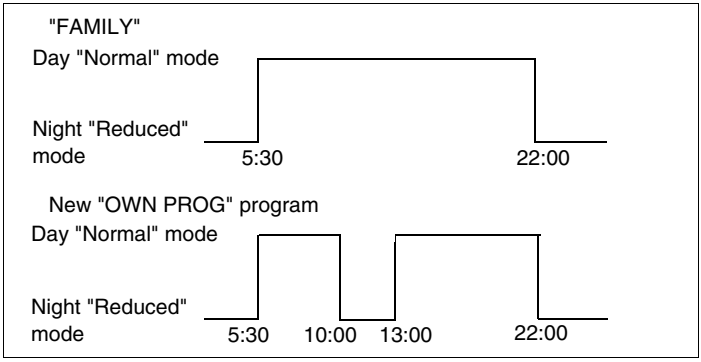
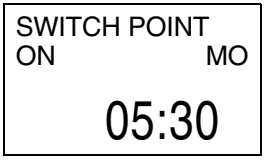


Fig. 9 Adding switching points to interrupt a heating phase

- Select a heating program (see Chapter 8.9 "Selecting a preset heating program", page 40).



The first switching point (Monday, 05:30) appears.

Turn the dial anti-clockwise until the display illustrated below appears.

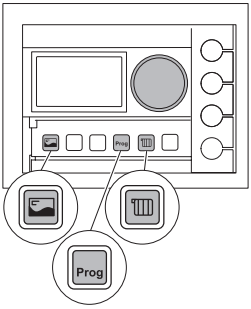
SWITCH POINT
---- ----
--:--

Enter the switching point (see Chapter 8.12 "Creating a new heating program", page 45).

USER NOTE

If you have assigned all 42 switching points, the "SWITCH POINT" display no longer appears. You cannot enter any more switching points.

8.14 Deleting switching points



You can delete individual switching points in a heating program.

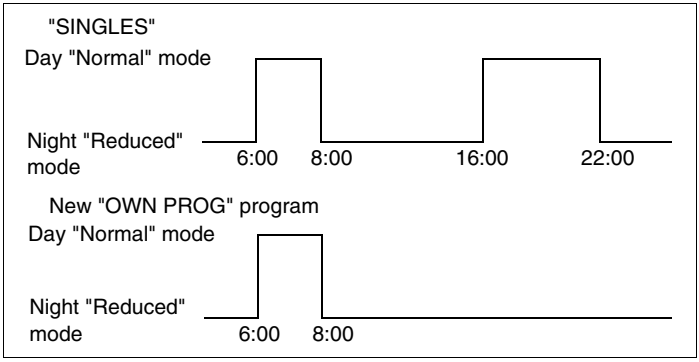


Fig. 10 Deleting switching points at 16:00 and 22:00

- Select a heating program (see Chapter 8.9 "Selecting a preset heating program", page 40).

Using the dial select the first switching point to be deleted. Example: "16:00".

SWITCH POINT
ON MO

16:00

The first switching point (Monday, 16:00) appears.

Simultaneously press the "Display" and "Heating circuit" buttons.

SWITCH POINT
DELETE

888888

On the display all the eights appear and then disappear. When all the eights disappear, the selected switching point has been deleted.

Release the "Display" and "Heating circuit" buttons.

USER NOTE

Make sure that you always delete both an ON switching point and an OFF switching point. Otherwise the heating system will remain in day mode at night, for example (Fig. 11).

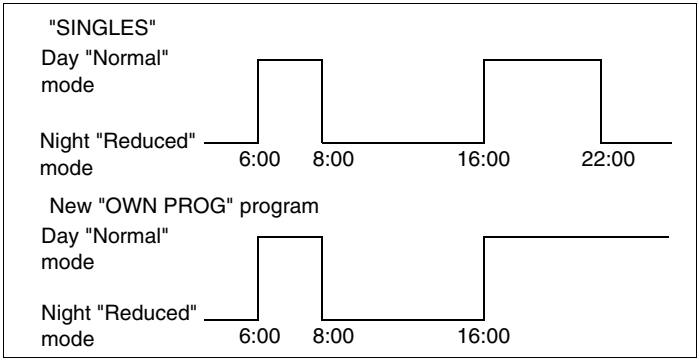
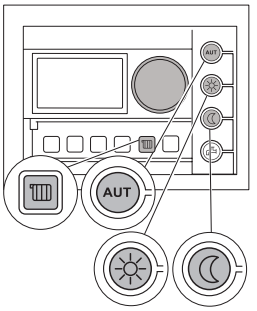


Fig. 11 Incomplete deletion of switching points

8.15 Setting the operating mode for domestic hot water



This allows you to change the DHW temperature in the DHW cylinder.

Hold down the "Heating circuit" button and select "DHW" with the dial.

HEAT CIRC
DHW

Release the "Heating circuit" button.

ACTUAL
ROOM TEMP
21.5 °C

Then the standard display will be shown again.

Choose the operating mode you require for DHW heating by pressing a button:

Button	DHW operating mode
"AUT"	**"DHW AUTO DAY" (automatic mode)** In the factory setting, DHW heating begins 30 minutes before the day mode of the first heating circuit, and ends with the beginning of night mode of the last heating circuit. The "DAY" or "NIGHT" display indicates the current operating status, i.e. DHW is switched on or off. Alternatively, you can enter a separate DHW program.
"Day mode"	**"DHW CONSTANT OP"** The water inside the DHW cylinder is constantly maintained at the set temperature.
"Night mode"	**"DHW OFF"** DHW heating is switched OFF. You can start DHW heating at any time by pressing the "DHW" button (see Chapter 7.4.2 "Single DHW loading", page 28).

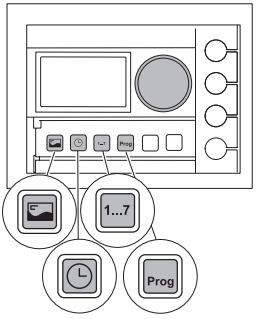
Tab. 4 DHW operating mode

Approximately one second after pressing the button, the display returns to the standard display.

USER NOTE

In automatic mode, the DHW temperature is reduced when all heating circuits are in night mode (see Chapter 7.2.1 "Selecting automatic mode", page 21) or if you have entered a separate DHW program.

8.16 Entering a DHW program



In the factory setting, the ON and OFF times for DHW heating are linked to the chosen heating program. This ensures that hot water is available during the heating phases (day mode).

If you want to enter a separate DHW program, we recommend loading the DHW cylinder once in the morning before heating begins and possibly reloading it once in the evening if further hot water is required (see Fig. 12). This will allow you to reduce your energy consumption even more.

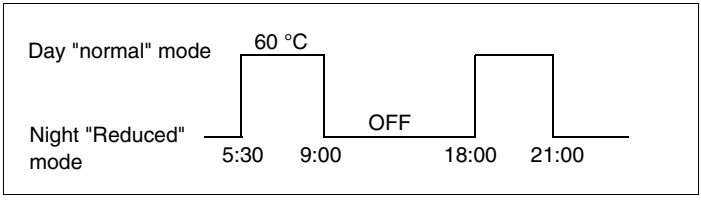


Fig. 12 Example: DHW heating

USER NOTE

Should you need additional hot water, you can reload it for a short time (see Chapter 7.4.2 "Single DHW loading", page 28).

Entering a DHW program

Hold down the "Heating circuit" button and select "DHW" with the dial.

HEAT CIRC
DHW

Release the "Heating circuit" button.

ACTUAL
ROOM TEMP
21.5 °C

Then the standard display is shown again.

Hold down the "Prog" button and select the "NEW PROG" heating program with the dial.

Release the "Prog" button.

SWITCH POINT
---- ----
--:--

You can now enter the first switching point. Proceed in the same way as for entering a heating program (see Chapter 8.12 "Creating a new heating program", page 45).

Activating a new DHW program

Hold down the "Prog" button and select the "OWN PROG" heating program with the dial.

Release the "Prog" button.

Restoring the factory setting

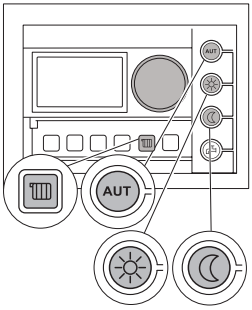
Hold down the "Prog" button and select the "TO HC T PROG" heating program (HTC = heating circuit time) with the dial. The ON and OFF-Times for DHW are linked again to the chosen heating program.

Release the "Prog" button.

USER NOTE

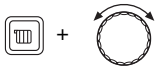
In order for the DHW program to be effective, make sure that "DHW AUTO DAY" is selected as the operating mode (see Chapter 8.15 "Setting the operating mode for domestic hot water", page 50).

8.17 Setting the operating mode for DHW circulation



The DHW circulation pump provides an almost instantaneous supply of DHW to the taps. To this end, the DHW is circulated by a separate DHW circulation pipe twice an hour for three minutes. Your installer can adjust this interval at the service level.

You can modify the operating mode of the DHW circulation as follows:



Hold down the "Heating circuit" button and select "CIRCULATION" with the dial.

HEAT CIRC
DHW CIRC

Release the "Heating circuit" button.

ACTUAL
ROOM TEMP
21.5 °C

Then the standard display is shown again.

Choose the operating mode you require for DHW circulation by pressing a button:

Button	DHW circulation operating mode
"AUT"	**"DHW CIRC AUTO DAY" (automatic mode)** 30 minutes before the first heating circuit is switched on, the DHW circulation pump starts to run at the set interval and stops when the last heating circuit is switched off (factory setting). The "DAY" or "NIGHT" display indicates the current operating status, i.e. the DHW circulation pump is switched on or off. Alternatively, you can enter a separate DHW circulation program.
"Day mode"	**"DHW CIRC CONSTANT OP"** The DHW circulation pump will operate at the set interval, i.e. independent of the heating circuits.
"Night mode"	**"DHW CIRC OFF"** There will be no interval selection of the DHW circulation pump. When you press the "DHW" button, you switch the DHW circulation pump ON for the duration of the single DHW loading.

Tab. 5 DHW circulation operating mode

After pressing the button, the display returns to the standard display.

8.18 Entering a DHW circulation program

With a DHW circulation program you can enter the ON and OFF times for the DHW circulation pump independently from the heating program. Proceed in the same way as for entering a DHW program (see Chapter 8.16 "Entering a DHW program", page 51).

8.19 Changing the standard display

You can change the standard display on the RC30 as follows:

Hold down the "Display" button and select the required standard display with the dial.

The following values can be displayed as the standard display:

Setting	Explanation
"ACT ROOM TEM"	Actual room temperature (factory setting)
"SET ROOM TEM"	Set room temperature
"OUTSIDE TEMP"	Actual temperature outside the building
"BOILER TEMP"	Actual boiler temperature
"DHW TEMP"	Actual DHW temperature in the DHW cylinder
"OP MODE"	Selected operating mode
"TIME"	Current time
"DATE"	Current date
"FLUE GAS TMP"	Actual flue gas temperature (if temperature sensor fitted)

Tab. 6 Possible standard displays

Release the "Display" button. The selected standard display has now been saved.

Press the "Back" button or close the flap.

The standard display changes to your chosen display.

USER NOTE

You can always adjust the set room temperature in automatic mode, regardless of which standard display you choose. Whilst you are adjusting the setting, the display changes to "SET ROOM TEM" (see Chapter 7.3 "Setting the room temperature", page 24).

9 Special functions (additional menu)

You can use the special functions to operate your heating system economically in special circumstances, e.g. during a winter holiday.

The special functions are grouped together in the additional menu on the RC30.

The following special functions can be chosen via the menu:

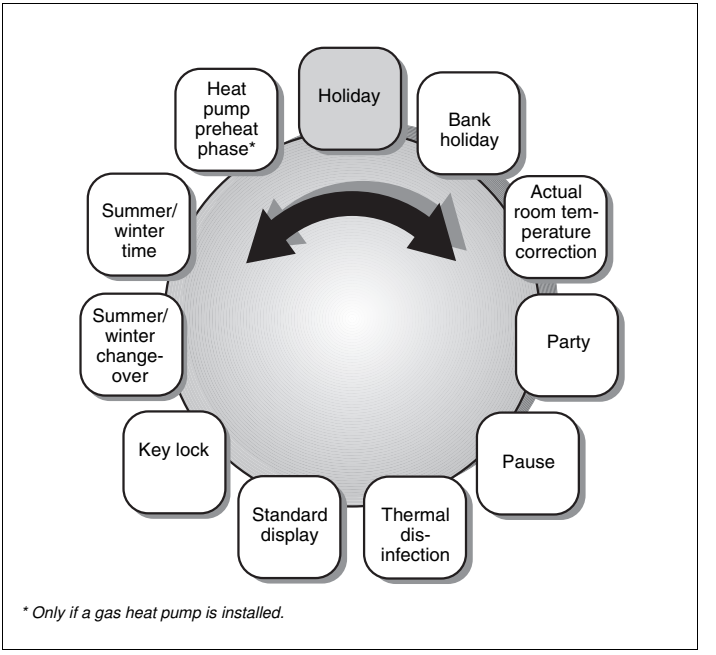
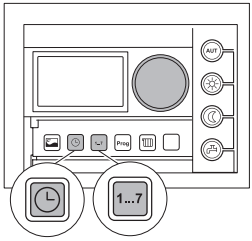
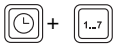


Fig. 13 Special functions in the additional menu

9.1 Opening and using the additional menu



Opening the additional menu



Press the "Time" and "Weekday" buttons simultaneously and release them again.

ADD MENU
HOLIDAY

You are now in the additional menu and can access the special functions.

Using the additional menu

The special functions are selected using the dial and the "Display" button.

Turn the dial to move between the menu options.

Press and release the "Display" button to select a menu option.

Hold down the "Display" button and simultaneously turn the dial to change a value.

Release the "Display" button to store a changed value.

Returning to the menu selection

Press "Back".

You are back in the additional menu and can choose the next setting.

Returning to the standard display

Press the "Back" button repeatedly or close the flap to return to the standard display.

9.2 Setting the holiday function

You want to interrupt the current heating program because you are going on holiday for a few days and want less heating while you are away.

The advantage of the holiday function over manual night mode is that after your holiday you will come back to a warm home and the control returns to its normal funktion.

USER NOTE

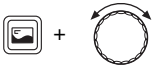
The set holiday function starts at 00:00 on the start day and ends at 00:00 on the end day. You can only enter one holiday period at a time.

- Open the additional menu (see "Opening and using the additional menu" page 57).

Using the dial select "ADD MENU HOLIDAY".

Press and release the "Display" button.

You are now in the "HOLIDAY" menu.



Hold down the "Display" button and select the required heating circuit with the dial.

HOLIDAY
RC30 HEATCIR

Release the "Display" button. Now you can choose between

– RC30 heating circuits (only displayed if heating circuit 1 and heating circuit 2 are assigned to the RC30)

– Heating circuit 1 or 2

– DHW (including DHW circulation)

– Entire system (heating circuits and DHW)

USER NOTE

DHW heating is only switched off if both heating circuits are in holiday mode (DHW heating "TO HT C PROG"). This does not apply if you have entered a separate DHW or DHW circulation program, however.

HOLIDAY
START DATE
21.12.02

You can now enter the start date for your holiday.

Hold down the "Display" button and select the required start date with the dial.

Release the "Display" button. The start date is stored.

Now set the end date for your holiday.

Hold down the "Display" button and select the required end date with the dial.

HOLIDAY
END DATE

03.01.03

Release the "Display" button. The end date is stored.

USER NOTE

Make sure that the end date is after the start date. If the start and end dates are the same, the specified holiday period is deleted. You can cancel the holiday function at any time by setting the start date and the end date to the same date.

Now set the room temperature for the holiday function:

Hold down the "Display" button and select the required holiday temperature with the dial.

HOLIDAY
TEMPERATURE

17 °C

You can enter a holiday temperature in the range from 10 °C to 30 °C (factory setting 17 °C).

Release the "Display" button. The holiday temperature is stored.

USER NOTE

If the RC30 or an RC20 remote control is installed in the living room (room temperature control), then the heating only switches on if the temperature drops below the holiday temperature in this room.
Otherwise (outside temperature control) the room temperature is reduced to the holiday temperature (pumps run).

USER NOTE

If the holiday function is active, only the "AUT" button LED is illuminated. The LEDs in the "Day mode" and "Night mode" buttons are not illuminated.

Interrupting and continuing the holiday function

If you are staying in your home during the holiday function period and want to run the heating, you can interrupt the holiday function.

To run the heating (in day mode):

Press "Day mode".

To continue the holiday function:

Press "AUT".

9.3 Setting the bank holiday function

You can choose to interrupt the current heating program if your daily routine changes for a short time.

If there is a bank holiday coming, for example, or you want to spend a day off at home, you can adopt the heating times from your Saturday heating program for these days. The heating settings for this period are then the same as for a Saturday.

USER NOTE

The set bank holiday function starts at 00:00 on the start day and ends at 00:00 on the end day. You can only enter one bank holiday period at a time.

- Open the additional menu (see Chapter 9.1 "Opening and using the additional menu", page 57).

Using the dial select "ADD MENU BNK HOLIDAY".

Press and release the "Display" button. You are now in the "BNK HOLIDAY" menu.

Hold down the "Display" button and select the required heating circuit with the dial.

BNK HOLIDAY
RC30 HEATCIR

Release the "Display" button. Now you can choose between

– RC30 heating circuits (only displayed if heating circuit 1 and heating circuit 2 are assigned to the RC30)

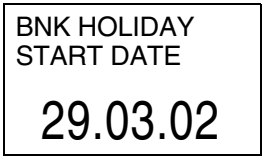
– Heating circuit 1 or 2

– DHW (including DHW circulation)

– Entire system (heating circuits and DHW)

Press the "Display" button. You can now enter the start date for the bank holiday.

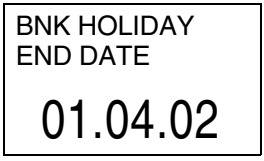
Hold down the "Display" button and select the required start date with the dial.



Release the "Display" button. The start date is stored.

Now enter the date of the first normal day after the holiday:

Hold down the "Display" button and select the required end date with the dial.



Release the "Display" button. The end date is stored. Now the Saturday heating program will be used on the specified days.

USER NOTE

Make sure that the end date is after the start date. If the start and end dates are the same, the specified period is deleted. You can cancel the bank holiday function at any time by setting the start date and the end date to the same date.

You do **not** need to enter a room temperature for the bank holiday function, because it will automatically be taken from the active heating program.

Interrupting and continuing the bank holiday function

If you leave home for an extended period during the current bank holiday function period and want to heat in setback mode only, you can interrupt the bank holiday function.

To heat with a reduced temperature (in night mode):

Press the "Night mode" button.

To continue the bank holiday function:

Press "AUT".

9.4 Calibrating the room temperature

There may be a separate thermometer near to the RC30, displaying a different value. If you want to calibrate the RC30 to the thermometer, you can use the "Calibration" function. Before calibrating the room temperature, please consider the following points:

– Is the thermometer more accurate than the RC30?

– Is the thermometer situated right next to the RC30?

USER NOTE

A thermometer may display temperature changes more slowly or more quickly than the RC30. It is therefore unadvisable to calibrate the RC30 while your heating system is cooling down or heating up.

- Open the additional menu (see Chapter 9.1 "Opening and using the additional menu", page 57).

Using the dial select "ADD MENU CALIBRATION".

Press the "Display" button.

You are now in the "CALIBRATION" menu.

Hold down the "Display" button and select the required calibration value with the dial.

CALIBRATION
ACT ROOM TEM

+0.5 K

You can enter a value in the range from –5.0 to +5.0 (factory setting 0.0). The "K" in the display stands for the unit Kelvin; 1 K corresponds to 1 °C.

Example: If the temperature displayed by the thermometer is 0.5 °C higher than that displayed by the RC30, enter "+0.5 K" as the calibration value.

Release the "Display" button. The set calibration value is stored.

Press the "Back" button or close the flap.

USER NOTE

You can also have an additional room temperature sensor installed for the RC30. This is useful if you want to measure the temperature in another room with the RC30, for example if the comparison with a thermometer is still unsatisfactory even after calibration.

9.5 Setting the Party function

With the Party function you can set the time at which the heating normally switches to night mode to a later time. This extends heating in day mode so that you can enjoy the company of your guests later into the evening.

- Open the additional menu (see Chapter 9.1 "Opening and using the additional menu", page 57).

Using the dial select "ADD MENU PARTY".

Press and release the "Display" button.

You are now in the "PARTY" menu.

Hold down the "Display" button and select the required heating circuit with the dial.

Release the "Display" button.

You can now enter the number of hours for which you want to continue heating in day mode (starting from now).

Hold down the "Display" button and select the required number of hours with the dial. Example: "2 h".

PARTY
NO OF HOURS
2 h

You can enter a value from 0 to 99 (factory setting = 0).

Release the "Display" button. The number of hours is stored.

Press the "Back" button or close the flap.

The Party function is activated.

USER NOTE

Once the specified number of hours has elapsed, the Party function is deactivated.

If you want to use the Party function again the next evening, enter the number of hours again.

Cancelling the Party function early

Set the number of hours in the Party function to "0" in order to end it before the specified number of hours has elapsed.

9.6 Setting the Pause function

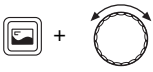
The Pause function can be used to switch your heating to setback heating mode (night mode) for a certain period, regardless of the current heating program.

- Open the additional menu (see Chapter 9.1 "Opening and using the additional menu", page 57).

Using the dial select "ADD MENU PAUSE".

Press and release the "Display" button.

You are now in the "PAUSE" menu.

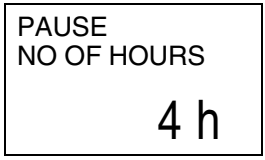


Hold down the "Display" button and select the required heating circuit with the dial.

Release the "Display" button.

You can now enter the period of time for which you want the heating to switch to setback mode.

Hold down the "Display" button and select the required number of hours with the dial. Example: "4 h".



Your heating system will interrupt the normal heating mode for 4 hours. You can enter a value from 0 to 99 (factory setting = 0).

Release the "Display" button.

The number of hours is stored.

Press the "Back" button or close the flap.

The Pause function is activated.

USER NOTE

Once the specified number of hours has elapsed, the Pause function is deactivated.

If you want to use the Pause function again, enter the number of hours again.

Cancelling the Pause function early

Set the number of hours in the Pause function to "0" in order to end it before the specified number of hours has elapsed.

9.7 Thermal disinfection

If you activate the "Thermal disinfection" [pasteurisation] function, the DHW is heated once a week or once a day to a temperature which is high enough to destroy pathogenic agents (e.g. legionella).

WARNING!

RISK OF SCALDING

from hot water at the taps.
During the thermal disinfection process the DHW can be heated to a temperature above 60 °C.

- Only draw off mixed hot and cold water during or just after thermal disinfection.

- Open the additional menu (see Chapter 9.1 "Opening and using the additional menu", page 57).

Using the dial select "ADD MENU THERM DISINF".

Hold down the "Display" button and select "THERMAL DISINFECTION – YES" with the dial.

THERMAL DISINFECTION
YES

Release the "Display" button. In accordance with the factory settings thermal disinfection begins every Tuesday at 1.00 and heats the water to 70 °C.

Turn the dial clockwise to access the other settings.

	Input range	Factory setting
Thermal disinfection	Yes/No	No
Disinfection temperature	60 °C–80 °C	70 °C

	Input range	Factory setting
Disinfection day	Mo, Tu, We, Th, Fr, Sa, Su, Mo–Su	Tu
Disinfection time	00:00 – 23:00	1:00

Hold down "Display" and turn the dial until the required value appears.

Release "Display" to store the value.

USER NOTE

If possible, choose a time for thermal disinfection at which nobody will be drawing off DHW (e.g. during the night).

9.8 Changing the standard display

You can change the standard display on the RC30 either via the additional menu or directly – as described in Chapter 8.19 "Changing the standard display", page 55. This section also describes all the standard display options.

9.9 Switching on the button lock

You can switch on a button lock (child lock). The button lock prevents your heating system settings from being changed accidentally.

- Open the additional menu (see Chapter 9.1 "Opening and using the additional menu", page 57).

Using the dial select "ADD MENU KEY LOCK".

Press the "Display" button.

You are now in the "KEY LOCK" menu.

Hold down the "Display" button and select the setting "On" with the dial.

KEY LOCK

ON

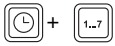
Release the "Display" button. The button lock is now switched on.

Press the "Back" button or close the flap.

WEEKDAY
+ TIME KEY

If you press a button whilst the button lock is activated, the display shows "Weekday (DAY/DATE) + TIME KEY" to tell you how to switch off the key lock again.

Switching off the key lock again



Simultaneously press the "Time" and "Weekday (Day/Date)" buttons.

KEY LOCK

OFF

The key lock is switched off again.

9.10 Setting summer/winter changeover

If your heating system is in automatic mode (LED next to the "AUT" button illuminated), the RC30 performs the summer/winter changeover automatically. In summer mode the heating is switched off and only DHW is heated. In winter mode the heating and DHW are activitated.

Automatic summer/winter changeover depends on the following factors:

– Outside temperature

– Type of construction/thermal insulation

The "adjusted" outside temperature is calculated from the outside temperature and the thermal insulation of your home (Fig. 14).

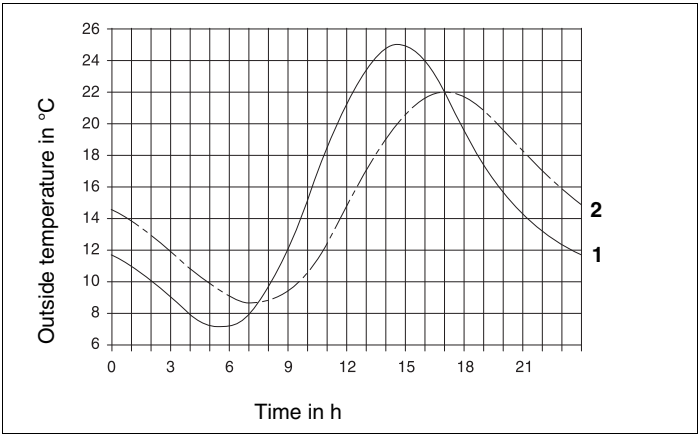


Fig. 14 Current and adjusted outside temperature in comparison

Item 1: *Current outside temperature*

Item 2: *Adjusted outside temperature*

The adjusted outside temperature is a theoretical variable calculated by the RC30, which takes into account the heat storage capacity of the walls. For example, with an outside temperature of 10 °C and the heating switched off, the temperature inside the home can still be 16 °C. The inside temperature falls slowly.

USER NOTE

For summer/winter changeover, your installer must have set up outside temperature dependent control (see "Outside temperature dependent control", page 6).

Summer/winter changeover does not apply to room temperature control.

Summer mode

A changeover threshold for summer/winter changeover is entered in the RC30 (factory setting 17 °C). When the adjusted outside temperature exceeds the changeover threshold, the heating system switches to summer mode (DHW heating only).

If you require heating for a short period in summer mode:

Press the "Day mode" button to switch to normal heating mode for a short time (see Chapter 7.2.2 "Selecting manual mode", page 23).

Press "AUT" to return to automatic summer mode.

Winter mode

When the adjusted outside temperature falls below the changeover threshold, the heating system switches to winter mode (heating and DHW heating).

Setting the changeover threshold

- Open the additional menu (see Chapter 9.1 "Opening and using the additional menu", page 57).

Using the dial select "ADD MENU SU/WI CHANGE".

Press the "Display" button.

You are now in the "SU/WI CHANGE" menu.

Hold down the "Display" button and select the required heating circuit with the dial.

Release the "Display" button.

You can now enter the changeover threshold.

Hold down the "Display" button and select the required changeover threshold with the dial.

SU/WI CHANGE
THRESHOLD
17 °C

You can enter a value from 10 °C to 30 °C (factory setting 17 °C) or sellect permanently "SUMMER" or "WINTER". In the "SUMMER" setting the heating is always switched off, and in the "WINTER" setting it is always switched on. There is no automatic changeover.

Release the "Display" button.

The changeover threshold for summer/winter changeover is stored.

Press the "Back" button or close the flap.

USER NOTE

To conserve energy during the in-between seasons of spring and autumn, you can lower the changeover threshold to e.g. 16 °C. This turns off the heating when the adjusted outside temperature is 1 °C lower.

If you would like a higher level of heating comfort during the in-between seasons, raise the changeover threshold.

9.11 Automatic summer and winter time adjustment

The RC30 switches automatically between summer and winter time. The date is determined by the European agreement:

– Changeover to winter time:
On the last Sunday in October the time changes from 03:00 to 02:00 (–1 h).

– Changeover to summer time:
On the last Sunday in March the time changes from 02:00 to 03:00 (+1 h).

- Open the additional menu (see Chapter 9.1 "Opening and using the additional menu", page 57).

Using the dial select "ADD MENU SU/WI TIME".

Press the "Display" button.

You are now in the "SU/WI TIME" menu.

Hold down the "Display" button and select the setting "YES" with the dial.

SU/WI TIME
CHANGEOVER
YES

You can choose between "YES" and "NO".

Release the "Display" button.

Your heating system will now switch between summer and winter time automatically.

Press the "Back" button or close the flap.

USER NOTE

Should the statutory dates change, set summer/winter time changeover to "NO".

Then change the time manually (see Chapter 8.5 "Setting the time", page 34).

9.12 Setting the preheat phase for a gas-operated heat pump (not in the UK)

If a gas-operated heat pump (Loganova GWP) is installed in your heating system, we recommend that you set a preheat phase. This setting has no effect on other devices.

During the preheat phase the heat pump unit preheats the heating system without the peak load boiler. The continuous running of the heat pump generally increases the overall efficiency and saves more energy than a reduction in the room temperature.

The preheat phase starts at the preset time before the day mode of the first heating circuit.

- Open the additional menu (see Chapter 9.1 "Opening and using the additional menu", page 57).

Using the dial select "ADD MENU HP PREHEAT".

Press the "Display" button.

You are now in the "HP PREHEAT" menu.

Hold down the "Display" button and select the required length of the preheat phase with the dial.

HEAT PUMP
PREHEAT PHS
02:00

You can set a value in hours and minutes (up to max. 16:30 h:min). In the factory setting preheating is switched off. The maximum efficiency is obtained when the heat pump runs constantly. To achieve this, set the length of the preheat phase so that it is longer than the night mode period in the chosen heating program.

Release the "Display" button.

The preheat phase length is stored.

Press the "Back" button or close the flap.

10 Troubleshooting

This chapter details frequently asked questions about your heating system and their respective answers. This will, in many cases, enable you to troubleshoot perceived faults. At the end of the chapter, faults and their remedies are listed in a table.

10.1 Frequently asked questions

Why do I set a room temperature, even though it is not measured?

When you set the room temperature, even though the room temperature is not measured, you change the heating curve. This also changes the room temperature. When you set the room temperature, the temperature of the water in the boiler changes and hence the temperature of the radiators (see "How does the RC30 work?", page 5).

Why does the room temperature measured with a separate thermometer not correlate with the set room temperature?

Different values influence the room temperature. If the RC30 is mounted against a cold wall, it will be influenced by the cold temperature of the wall. If it is installed in a warm part of the room, e.g. close to a radiator, it will be influenced by the heat from that. This is why a separate thermometer can display a different room temperature from that set on the RC30.

To compare the actual room temperature with the values measured by another thermometer, the following are important:

- The separate thermometer and the RC30 must be located close together.
- The separate thermometer must be accurate.
- Do not compare the room temperatures when the heating system is in the process of heating up as the RC30 and the separate thermometer may respond to the increasing room temperature at different speeds.

If you have checked these points and there is still a discrepancy, you can use the "Calibrating the room temperature" function (see Chapter 9.4 "Calibrating the room temperature", page 64).

Why do the radiators get (too) hot when the outside temperature is relatively high?

If you have a heating system with a heating circuit and no mixer valve, this is normal (see "What are heating circuits?", page 9). The circulation pump only starts up when the boiler reaches a predefined flow temperature. If the flow temperature is higher than the temperature required on the basis of the outside temperature, the radiators may get hotter for a short time. The heating control unit detects this and quickly responds accordingly. Do not adjust the thermostatic valves on the radiators and wait until the set room temperature is reached.

In summer mode, radiators can heat up in certain circumstances for a short time: The circulation pump is started up automatically at a predefined interval to prevent it from blocking. If the pump happens to be started up immediately after DHW heating, the unusable residual heat is dissipated via the heating circuit and the radiators.

Why does the heating system pump run during the night, even though there is little or no heating on?

This depends on the setting chosen for night setback by your installer (see "Why do I need a heating program?", page 8). Please ask your installer about the setback mode setting.

- **Total shutdown:** The heating system (and therefore also the pump) is automatically switched off in night mode. If the outside temperature drops below the frost protection temperature, the pump is automatically switched on by the "Frost protection" function.
- **Reduced room temperature:** The pump continues to run even if the heating is reduced, in order to maintain the lower room temperature.
- **Change between total shutdown and reduced heating subject to room temperature or outside temperature:** The heating system is switched on automatically if the actual temperature falls below the set value. The pump then starts up too.

The actual room temperature is higher than the set room temperature. Why is the boiler still running?

The boiler may heat up in order to heat DHW.

Your heating system can be set to three possible control modes (see "How does the RC30 work?", page 5):

– **Room temperature control:** The boiler switches off when the set room temperature is reached.

– **Outside temperature dependent control:** The heating system runs according to the outside temperature.

– **Outside temperature dependent control with room temperature hook-up:** The heating system uses the advantages of both of the above control modes.

In the last two cases, the boiler may run even if the actual room temperature is higher than the set room temperature.

We reserve the right to make any changes due to technical modifications.

10.2 Fault table

Please notify your installer if a fault occurs that is not listed in the table, or if you cannot rectify the fault yourself.

Code	Display	Cause	Remedy
	No display	Your heating system has been switched OFF.	Switch ON the heating system.
		The power supply from the heating system has been cut off.	Check whether the RC30 sits correctly in its wall mounting base.
			Check whether two leads are connected to the RC30 wall mounting base.
	"MAKING CONNECTION EMS"	When the controller is switched on, data is exchanged between the EMS and the RC30 (no fault).	Wait a few seconds.
A01/816	"CONNECTION INTERRUPTED EMS	Communication to the Energy Management System (EMS) is faulty, e.g. through a loose contact or through electro-magnetic interference.	Check whether the RC30 sits correctly in its wall mounting base.
			Check whether two leads are connected to the RC30 wall mounting base.
A11/802	"TIME NOT SET"	The date or time is not set. This may have been caused by an extended power failure.	Enter the time or date so that all heating programs and other functions can operate.
A11/803	"DATE NOT SET"		
Hxx	"OPEN FLAP"	Maintenance is required. The heating system remains active as long as possible.	Open the flap to display the code. Notify your installer who should carry out the maintenance.
H 7	"MAINTENANCE SYSTEM PRESSURE"	The water pressure in the heating system has dropped to a low value. This is the only maintenance message which you can action yourself. The heating system must be equipped with a digital pressure sensor. Regularly check the heating system water pressure at the pressure gauge, if this is not installed.	Top up the heating water as described in the boiler operating instructions.
xxx/xxx	"OPEN FLAP FAULT"	There is a fault on the heating system.	Open the flap to display the code. Inform your installer and give him the code.

Tab. 7 Fault table

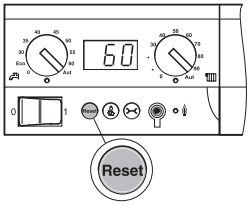
Code

Maintenance messages are identified by one three-digit code, faults by two three-digit codes. These give the installer information about the cause.

The first three-digit code is displayed directly.

Press the "Display" button to display the second code.

Resetting faults (Reset)



Some faults can be rectified by resetting the system.

- Press the "Reset" button on the control panel to reset faults.

The display shows "rE" whilst the reset is implemented.

If the fault recurs, notify your installer as soon as possible, especially if there is a risk of frost.

CAUTION!

SYSTEM DAMAGE

through frost.
The heating system can freeze up in cold weather if it has been switched OFF through a fault shutdown.

- Try and reset the fault.
- If this is impossible, immediately notify your installer.

11 Index

Symbols

"OFF" display 25
"SET DHW TEMP - BLOCK" display . . 27
"WEEKDAY + TIME KEY" display . . . 71

A

Additional menu 56
Adjusted outside temperature 72
Automatic mode 21
  DHW 50
  DHW circulation 54

B

Bank holiday function 62
Basic functions 20

C

Child lock, see Key lock 71
Cleaning 14
Control
  outside temperature dependent 6
  with room temperature hook-up 7
Controls 15, 18

D

Date 33
Day mode 16, 21
DHW
  heating 26, 51
  operating mode 50
DHW circulation
  automatic mode 54
  operating mode 53
DHW circulation program 54
DHW program 51
DHW temperature 27, 31
Disinfection, thermal 29, 69
Display 15, 16

E

Emergency stop switch – heating system 13
Extended functions 30

F

Factory setting
  DHW temperature 26
  holiday mode 60
  party function 66
  pause function 68
  summer/winter changeover 74
Fault table 81
Flap, key cover 15, 16
Flow temperature 5
Frost risk 13, 82

H

Heat pump, gas-operated 76
Heating circuit 9, 35, 37
Heating comfort 39, 74
Heating control unit 5
Heating curve 5
Heating mode
  normal, see Day mode
  setback, see Night mode
Heating program 39, 45
  DHW 51
  DHW circulation 54
Heating, economical 11
Holiday function 58

I

In-between seasons, heating in . . . 22, 74

We reserve the right to make any changes due to technical modifications.

K

Key lock 71

L

Language selection 19
LED 16
Low loss header module WM10 . . . 4, 10

M

Manual mode 23
Mixer module MM10 . . . . . 4, 10

N

Night mode 16, 21

O

Operating level
- basic functions 20
- extended functions 30
- special functions 56

Operating mode
- automatic 20, 21
- day 23
- DHW 50
- DHW circulation 54
- manual 23
- night 23
- selection 20

Operating status (LEDs) 16
Operating values 31
Outside temperature 5, 72

P

Party function 66
Pause function 67
Power failure 18
Preheat phase, gas heat pump 76

R

RC30 heating circuits 36
Reference room 6
Remote control 9
Reset 82
Room temperature
- actual 31
- calibration 64
- set 31
- setting as required 24

Room temperature control 6
Room temperature sensor, external . . . 65

S

Safety 13
Saving energy 8, 11, 39, 51, 74
Shutdown 18
Special functions 56
Standard display 55, 70
Start-up 18
Summer mode 15
Summer/winter changeover 72
Summer/winter time adjustment, autom. 75
Switching point 21
- adding 47
- deleting 48
- moving 42

T

Temperature, see Room temperature
Thermal disinfection 69
Thermostatic valve 7
Time 34
Type of construction 72

We reserve the right to make any changes due to technical modifications.

Notes

Notes

Notes

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